

## REMARKS

Claims 1-73 are pending. Information referred to in a previously submitted Information Disclosure Statement has not been considered. Claims 1-70 are rejected under 35 U.S.C. § 101. Claims 1-31 and 60 are rejected under 35 U.S.C. § 112. Claims 1-4, 6-8, 12, 14-16, 21, 22, 26, 31-34, 39, 44, 45, 47-50, 53, 55-57, 62, 65, 66 and 69 are rejected under 35 U.S.C. § 102. Claims 5, 9, 10, 11, 13, 17-20, 23-25, 27-38, 40-48, 50-54, 56-64, and 66-73 are rejected under 35 U.S.C. § 103. Applicants respectfully traverse these rejections. Claims 1, 6, 19, 22, 32, 45, 60, 63 are herein amended, and claims 33, 47, and 48 are canceled. No new matter has been added.

### Telephone Conversation With Examiner

Applicants' representative thanks Examiner Brown for the telephone conversation conducted on January 10, 2006. Applicants' representative called Examiner Brown to determine the status of the Information Disclosure Statements (IDSs) placed in the file, and specifically the status of the IDS submitted on December 29, 2004. In the instant Office Action, it is indicated that references listed on form PTO-1449 may not be in the file. During the conversation, Applicants' representative asked the Examiner what references were not in the file. Examiner Brown stated that three references were missing: (1) Riley, M., et al. (Eds.), "Open eBook™ Publication Structure 1.0," <http://www.openebook.org/specification.htm>, September 16, 2000, 1-77; (2) Shamir, A., et al., "Playing Hide and Seek with Stored Keys," *Third International Conference*, Franklin, M. (ed.), 1999, 118-124; and (3) Auchsmith, D., "Tamper resistant software: an implementation," *First International Workshop*, Anderson, Ross (ed.), 1996, 317-333.

The rejection under 35 U.S.C. § 101 was also discussed. Examiner Brown stated that the rejection could be overcome by amending the claims to include storing the computer program on a computer readable medium. Applicants' representative stated that he thought that was inherent in the claims. Applicants' representative pointed to the step in claim 1 directed to "generating a first set of computer-executable instructions" as an example of a step the inherently requires storage on a computer-readable medium. Examiner Brown

agreed to the inherency, but said that computer programs, *per se*, were not patentable subject matter.

**Information Disclosure Statement**

In view of the telephone conversation with the Examiner on January 10, 2006, the following references are submitted with this response: (1) Riley, M., et al. (Eds.), "Open eBook™ Publication Structure 1.0," <http://www.openebook.org/specification.htm>, September 16, 2000, 1-77; (2) Shamir, A., et al., "Playing Hide and Seek with Stored Keys," *Third International Conference*, Franklin, M. (ed.), 1999, 118-124; and (3) Auchsmith, D., "Tamper resistant software: an implementation," *First International Workshop*, Anderson, Ross (ed.), 1996, 317-333. Applicant requests that all Information Disclosure Statement Submissions filed in the application be entered and information referred to therein be considered.

**Claim Rejections - 35 U.S.C. § 101**

Claims 1-70 are rejected under 35 U.S.C. § 101. In view of the telephone conversation with Examiner on January 10, 2006, independent claims 1, 32, and 45, directed to creating a computer program and/or executing computer-readable instructions, have been amended to indicate that the computer program and/or computer-executable instructions are storable on a computer-readable medium. Claim 22, directed to a method, is amended to indicate that the method is implemented at least in part by a computing device. Accordingly, Applicants respectfully request that the rejection of claims 1-70 under 35 U.S.C. § 101 be reconsidered and withdrawn.

**Claim Rejections - 35 U.S.C. § 112**

Claims 1-31 and 60 are rejected under 35 U.S.C. § 112. Independent claims 1 and 22, and their dependent claims 2-21 and 23-31, respectively, are rejected under 35 U.S.C. § 112 as being indefinite because, as asserted in the instant Office Action, applying a key without

access to a key is indefinite. Specifically, it is asserted that “[c]laims 1, and 22 state that a computer program applies a cryptographic key to a first data.” These claims also state the computer program does not require access to the cryptographic key.”

Applicant respectfully disagrees with the assertion that claims 1 and 22 state that the computer program applies a cryptographic key. Claims 1 is directed to a method for creating a computer program. The method includes identifying a set of actions that are performed in the course of applying the cryptographic key. Performance of this act can include access to the cryptographic. But, the computer program created by the method does not require access to the cryptographic key. Claim 2 is directed to performing a first set of actions which apply the cryptographic key. These actions do not require access to the cryptographic key.

In the instant Office Action, page 19, lines 3-22, was cited to support the assertion that the computer program requires access to the cryptographic key. Applicant submits that page 19, lines 3-22 is not the appropriate portion of Applicant’s application to gain an understanding of the computer program not requiring access to the cryptographic key. Examiner is directed, instead, to page 16, line 9 through page 17, line 13, and 30, line 23 through page 31, line 2.

Because independent claims 1 and 22 do not state that the computer program requires access to the cryptographic key, it is requested that the rejection of independent claims 1 and 22, and their dependent claims 2-21 and 23-31, respectively, under 35 U.S.C. § 112 be reconsidered and withdrawn.

Claim 6 is rejected under 35 U.S.C. § 112 because, as asserted in the instant Office Action, the claim does not state what is being retrieved. Applicant respectfully disagrees. Claim 6 (prior to the instant amendment) recited in part “retrieval during execution of said second data.” This passage indicates that the second data is being retrieved. To improve readability, claim 6 is amended by inserting commas around the phrase “during execution.” Thus, amended claim 6 recites in part: “retrieval, during execution, of said second data.” Claim 6 is amended for purposes of improved readability and not for purposes of

patentability. Accordingly, Applicants request that the rejection of claim 6 under 35 U.S.C. § 112 be reconsidered and withdrawn.

Claims 19 and 60 are rejected under 35 U.S.C. § 112 because it is asserted that the term “substantially” is indefinite. Claims 19 and 60 are amended to remove the term “substantially.” Accordingly, Applicants request that the rejection of claims 19 and 60 under 35 U.S.C. § 112 be reconsidered and withdrawn.

**Claim Rejections - 35 U.S.C. § 102**

Claims 1-4, 6-8, 12, 14-16, 21, 22, 26, 31-34, 39, 44, 45, 47-50, 53, 55-57, 62, 65, 66, and 69 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,643,775, issued to Granger *et al.* (“Granger *et al.*”). In support of the forgoing rejections, it is asserted in the Office Action that Granger *et al.*, at column 6, lines 55-60 and column 7, lines 8-20, “teaches taking a set of actions (encrypting) using pseudocode so that access to the key is not necessary.”

Granger *et al.*, neither discloses nor suggests “said computer program does not require access to said cryptographic key,” as recited in amended independent claim 1, “said first set of actions not requiring for their performance access to said cryptographic key,” as recited in amended independent 22, “performance of said action does not require access to said cryptographic key,” as recited in amended independent claim 32, or “performance of said first action does not require access to said cryptographic key,” as recited in amended independent claim 45.

In contrast to Applicants’ claimed invention, for methods involving encryption and/or decryption, Granger *et al.* does require access to a cryptographic key. Granger *et al.* discloses three methods “for protecting software applications from unauthorized distribution and use (piracy). ... “The first method involves using values generated by a conventional ESD (Electronic Security Device) to encrypt and/or decrypt user data (such as a file) that is generated and used by the application. ... [T]he second method involves using pseudocode to

implement some or all of the application's copy protection functions. ... The third method involves the use of a special obfuscation tool to convert the code for selected copy-protection functions into unnecessarily long, inefficient sequences of machine code. In one implementation of the obfuscation tool, the developer can control the quantity of code that is generated by specifying one or more control parameters.” (Abstract).

Granger *et al.* teaches that the three techniques can be used separately or in combination, and that the ESD is used to generate cryptographic keys. Granger *et al.* does not teach, however, that access to the cryptographic key is not necessary. “The three techniques can be viewed as three separate "layers" of protection. Each layer can be used independently of the others, and only one of the layers (the Encryption Layer) requires the use of an ESD.” (Column 6, lines 7-12). “[C]opy protection code sends seed values to the ESD and receives responses values from the ESD. ... [T]he response values are used by the application’s copy protection code as a key for encrypting and/or decrypting user data that is generated and used b the application.” (Column 6, lines 18-25) Thus, Granger *et al.* specifically states that the key is received from the ESD.

Granger *et al.* further teaches that the other layers are used to conceal the encryption layer from pirates, but Granger *et al.* does not teach that access to cryptographic keys is not necessary. “The Pseudocode Layer and the Obfuscation Layer ... serve the purpose of concealing the implementation details of the Encryption Layer from pirates.

Because Granger *et al.* neither discloses nor suggests that access to the cryptographic key is not required, it is requested that the rejection of claims 1-4, 6-8, 12, 14-16, 21, 22, 26, 31-34, 39, 44, 45, 47-50, 53, 55-57, 62, 65, 66, and 69 under 35 U.S.C. § 102 be reconsidered and withdrawn.

**Claim Rejections - 35 U.S.C. § 103**

Claims 5, 9, 10, 11, 13, 17-20, 23-25, 27-38, 40-48, 50-54, 56-64, and 66-73 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Granger *et al.* in view of

various combinations of U.S. Patent No. 6,715,079 issued to Maytal (Maytal), U.S. Patent Application Publication No. 2002/0178412 in the name of Matsui (Matsui), U.S. Patent No. 6,598,162, issued to Moskowitz (Moskowitz), U.S. Patent No. 5,758,293, issued to Frasier (Frasier), U.S. Patent No. 5,892,899, issued to Aucsmith (Aucsmith), U.S. Patent No. 5,949,573, issued to Yarom (Yarom), U.S. Patent No. 5,850,554, issued to Carver (Carver), U.S. Patent No. 5,912,972, issued to Barton (Barton), and U.S. Patent No. 5,682,428, issued to Johnson (Johnson).

The arguments and remarks provided above with respect to rejections based on Granger *et al.*, under 35 U.S.C. 102 also apply to the rejections of claims 5, 9, 10, 11, 13, 17-20, 23-25, 27-38, 40-48, 50-54, 56-64, and 66-73 under 35 U.S.C. 103.

Further, a *prima facie* case of obviousness has not been established. No motivation to modify of combine references has been provided. The instant Office Action merely states that one of ordinary skill in the art would have modified or combined, without any reason why.

In a rejection under 35 U.S.C. §103, “the reference teachings must somehow be modified in order to meet the claims. The modification must be one which would have been obvious to one of ordinary skill in the art at the time the invention was made.” MPEP §706.02 (emphasis added)

“To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria.” MPEP § 2142 (emphasis added)

The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. “To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.” *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). See MPEP § 2144 - § 2144.09 for examples of reasoning supporting obviousness rejections. MPEP § 706.02(j) (emphasis added)

Because the arguments and remarks provided above with respect to rejections based on Granger *et al.*, under 35 U.S.C. 102 also apply to the rejections of claims 5, 9, 10, 11, 13, 17-20, 23-25, 27-38, 40-48, 50-54, 56-64, and 66-73 under 35 U.S.C. 103, and because a prima facie case of obviousness has not been established, it is requested that the rejection of claims 5, 9, 10, 11, 13, 17-20, 23-25, 27-38, 40-48, 50-54, 56-64, and 66-73 under 35 U.S.C. 103 be reconsidered and withdrawn.

**DOCKET NO.:** MSFT-0188/154574.01  
**Application No.:** 09/604,174  
**Office Action Dated:** November 15, 2005

**PATENT**

### **CONCLUSION**

In view of the foregoing arguments, remarks, and amendments, it is respectfully submitted that this application is in condition for allowance. Reconsideration of this application and an early Notice of Allowance are respectfully requested. In the event that the Examiner cannot allow this application for any reason, the Examiner is encouraged to contact the undersigned attorney to discuss resolution of any remaining issues.

Date: February 15, 2006

  
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